

**Claim Amendments**  
**Serial No.: 09/237,605**

11. (Twice Amended) An implant of titanium to be surgically implanted in living bone, comprising:

a threaded portion for engaging bone; and [uniformly acid etched]  
metal surface [substantially lacking] from which a native oxide layer [and including] had been substantially removed and thereafter acid etched to produce a substantially uniform array of irregularities having peak-to-valley heights not greater than about 10 microns, said acid etched surface being located on at least a part of said threaded portion.

17. (Twice Amended) A dental implant having a head portion, a neck portion, and a threaded portion for contact with bone wherein said head and neck portions are provided with a smooth surface for contact with overlying gingival tissue for blocking infection, and said threaded portion has a roughened region to promote osseointegration with bone while leaving at least one thread turn adjacent said neck portion smooth and unroughened, wherein said implant is titanium or titanium alloy and said roughened region is created by a two-step process in which the native oxide is substantially removed by contact with a first acid solution and followed by etching of the resulting surface with a second acid solution to produce a roughened surface consisting of a substantially uniform array of irregularities having peak-to-valley heights not greater than 10µm.

22. (Twice Amended) A titanium metal dental implant, comprising:  
a head portion for receiving a dental restoration component;  
a threaded portion for engaging bone; and  
a roughened region for facilitating osseointegration with said bone and being located on a part of said threaded portion, said roughened region [substantially lacking] being

uniformly acid etched after a native oxide layer had been removed [and being uniformly etched with an acid solution] to produce a substantially uniform array of irregularities having peak-to-valley heights not greater than about 10 microns.

27. (Twice Amended) A titanium implant to be surgically implanted in living bone, comprising:

a head portion having a non-round fitting; and

a threaded portion including a uniformly roughened titanium metal surface from which a native oxide layer had been substantially removed before being etched to produce [with] a substantially uniform array of irregularities having a peak-to-valley heights ranging from about 0.3 micron to about 10 microns.

34. (Amended) An implant of claim 27, wherein said head portion includes an upper flat surface, a portion of said implant between said upper flat surface and a point about 3 mm below said upper flat surface being smooth relative to said roughened threaded portion.

37. (Twice Amended) A titanium device to be surgically implanted in living bone, comprising:

a uniformly acid-etched exterior titanium metal surface [being substantially free of] from which a native oxide layer had been substantially removed and thereafter acid etched to produce [including] a substantially uniform array of irregularities having base-to-peak heights of less than about 10 microns.

47. (Twice Amended) A titanium device to be surgically implanted in living bone and including a uniform exterior titanium metal surface [being substantially free of] from which a native oxide layer had been substantially removed and thereafter roughened to

produce a substantially uniform array of irregularities having relatively uniform dimensions and peak-to-valley heights of less than about 10 microns, substantial numbers of said irregularities being substantially cone-shaped elements.